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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,380	04/15/2004	Jeffrey Gullicksen	4450-0351PUS	6623
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CIENA CORPORATION 1201 WINTERSON ROAD LINTHICUM, MD 21090				
EXAMINER DUONG, FRANK				
ART UNIT		PAPER NUMBER		
2616				

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary

Application No.

10/824,380

Applicant(s)

GULLICKSEN ET AL.

Examiner

Frank Duong

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is a response to communications dated 04/15/04. Claims 1-18 are pending in the application.

Information Disclosure Statement

2. The information disclosure statement filed 04/15/04 complies with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. It has been considered and placed in the application file.

Claim Objections

3. Claims 3-4, 6, 8, 12-13, 15 and 17-18 are objected to because of the following informalities:

As per claims 3-4 and 12-14, the term "and/or" should be changed to either --and-- or --or--.

As per claims 6, 15 and 18, the term "connection(s)" should be changed to either --connection-- or --connections--.

As per claims 8 and 17, the term "capable of" should be deleted to make to claimed limitation more definite.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 11 recite the limitation "the first ring network" in lines 7-8 and line 3, respectively. There is insufficient antecedent basis for this limitation in the claim.

Claims 7 and 10 recite the limitation "the configuration message" in line 1 and line 5, respectively. There is insufficient antecedent basis for this limitation in the claim.

Moreover, the clause "*wherein the configuration message includes a message ID, a node ID, a span ID, a line ID, line timeslots information, timeslot concatenation state, and timeslot add/drop state information*" is vague for it is not previously recited or mentioned in base claims.

Claims 16 and 18 recite the limitation "the configuration message" in line 1 and line 5, respectively. There is insufficient antecedent basis for this limitation in the claim.

Claims 2-6, 8-9, 12-15 and 17 variously dependent from their indefinite base claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

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applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-9 and 11-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Taniguchi (USP 6,122,250).

Regarding **claim 1**, in accordance with Taniguchi reference entirety, Taniguchi discloses a method for allowing a network element having network connections to a ring network to manage the network connections (*Figs. 1A-1C and col. 9, lines 7-26, Taniguchi shows a ring network having nodes A-D connected by ring transmission lines and discloses a method for building a ring topology*), the method comprising:

 sending a connection state message (*ring topology frame*) from the network element (A, B, C or D) around the ring network (*Figs. 1A-1C*) when the network element adds, deletes or modifies at least one timeslot within at least one of the network connections (*at col. 9, lines 17-19 and thereafter, Taniguchi discloses node A transmits in a clockwise direction a ring topology frame having "1" written as the number of the nodes inserted and its own ID is inserted first*);

 receiving the connection state message from the ring network, the connection state message having been updated by intermediate network elements that are part of the first ring network (*at col. 9, lines 20-26, Taniguchi also discloses the ring topology is circulated around the ring having all the nodes in the ring sequentially inserted their node IDs as discussed above and the result ring frame topology is received by node A*); and

 managing the network connections connecting the network element to the ring

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network by using the received connection state message (*ring topology frame*) (col. 9, lines 28-42 and thereafter, Taniguchi discloses node A, after determining that the ring topology frame has traveled a complete circle, adds the end flag and sends the completed ring topology frame for use by other nodes in the ring network in creating a squelch table. Building the squelch table in each individually node discussed at col. 9, line 44 to col. 10, line 20 corresponding to the claimed limitation).

Regarding **claim 2**, in addition to features recited in base claim 1 (see rationales discussed above), Taniguchi further discloses said sending step sending the connection state message (*ring topology frame*) from the network element around the ring network when the network element adds, deletes or modifies at least one of the network connections (*building the squelch table by each individually having node ID in correspondence with the channels or updating the squelch table in the event of a channel failure is discussed at col. 9, line 44 to col. 10, line 20 and thereafter*).

Regarding **claim 3**, in addition to features recited in base claim 1 (see rationales discussed above), Taniguchi further discloses said managing including detecting the addition and/or deletion of timeslots (*ADD/DROP TSA*) (col. 12, lines 22-23) at each of the network elements connected to the ring network (*building the squelch table by each individually having node ID in correspondence with the channels or updating the squelch table in the event of a channel failure is discussed at col. 9, line 44 to col. 10, line 20 and thereafter*).

Regarding **claim 4**, in addition to features recited in base claim 1 (see rationales discussed above), Taniguchi further discloses said managing including detecting the

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addition and/or deletion of network connections (*ADD/DROP TSA*) (*col. 12, lines 22-23*) at each of the network elements connected to the ring network (*building the squelch table by each individually having node ID in correspondence with the channels or updating the squelch table in the event of a channel failure is discussed at col. 9, line 44 to col. 10, line 20 and thereafter*).

Regarding **claim 5**, in addition to features recited in base claim 1 (see rationales discussed above), Taniguchi further discloses said managing including storing current concatenation information during a ring switch operation of the ring network (*col. 10, lines 39-45 or col. 12, lines 14-60 and thereafter*).

Regarding **claim 6**, in addition to features recited in base claim 1 (see rationales discussed above), Taniguchi further discloses said managing including squelching certain network connection(s) during a partial ring switch operation of the ring network (*col. 10, lines 39-45 or col. 12, lines 14-60 and thereafter*).

Regarding **claim 7**, in addition to features recited in base claim 1 (see rationales discussed above), Taniguchi further discloses wherein the configuration message includes a message ID, a node ID, a span ID, a line ID, line timeslots information, timeslot concatenation state, and timeslot add/drop state information (*the frame ID, node ID, span ID and line ID discussed at col. 9, lines 7-43 and the line timeslots information, time slot concatenation state as well as add/drop state information discussed at col. 10, lines 30-45 and thereafter*).

Regarding **claim 8**, in addition to features recited in base claim 1 (*see rationales discussed above*), Taniguchi further discloses wherein the network elements are capable of adding, dropping, passing through, and interchanging timeslots within the network connections (*the functionalities of the switch of Fig. 6 are discussed at col. 12, lines 14-24 and thereafter to include add/drop time slot assignment. Other claimed functionalities are inherent in the switch of Fig. 6*).

Regarding **claim 9**, in addition to features recited in base claim 1 (*see rationales discussed above*), Taniguchi further discloses at the intermediate network elements (*Figs. 1A-1C, any nodes that are not originating or terminating nodes*), using the received connection state message (*ring topology frame*) to manage their respective network connections to the ring network (*col. 9, lines 41-42, Taniguchi discloses each node creates a squelch table according to the ring topology*).

(note: claims 11-17 call for a system comprising elements mirrored the method steps of claims 1-9. Thus, they are rejected by the same rationales discussed above)

Regarding **claim 11**, in accordance with Taniguchi reference entirety, Taniguchi shows a communications system for managing network connections (Figs. 1A-1C), comprising:

a plurality of network elements (nodes A-D) connected in a ring network configuration via the network connections (*nodes A-D and the corresponding description at col. 9, line 10*);

at an originating network element (*node A*), sending a connection state message (*ring topology frame*) around the ring network when the originating network element adds, deletes or modifies at least one timeslot within at least one of the network connections (*at col. 9, lines 17-19 and thereafter, Taniguchi discloses node A transmits in a clockwise direction a ring topology frame having "1" written as the number of the nodes inserted and its own ID is inserted first*);

at the intermediate network elements (*nodes B-D*), updating the connection state message with topology information stored at each of the intermediate network elements (*col. 9, lines 20-27*);

at the intermediate network elements (*node B-D*), using the received connection state message to manage their respective network connections to the ring network (*col. 9, lines 20-27*);

at the originating network element (*node A*), receiving the connection state message from the ring network, the connection state message having been updated by intermediate network elements that are part of the first ring network (*col. 9, lines 28-37*); and

at the originating network element (*node A*), managing the network connections connecting the originating network element to the ring network by using the received connection state message (*col. 9, lines 28-42*).

Regarding **claim 12**, in addition to features recited in base claim 11 (see *rationales discussed above*), Taniguchi further discloses wherein the managing of the

network connections performed by the network elements includes detecting the addition and/or deletion of timeslots at each of the network elements connected to the ring network *building the squelch table by each individually having node ID in correspondence with the channels or updating the squelch table in the event of a channel failure is discussed at col. 9, line 44 to col. 10, line 20 and thereafter*).

Regarding **claim 13**, in addition to features recited in base claim 11 (see *rationales discussed above*), Taniguchi further discloses wherein the managing of the network connections performed by the network elements includes detecting the addition and/or deletion of network connections at each of the network elements connected to the ring network (*building the squelch table by each individually having node ID in correspondence with the channels or updating the squelch table in the event of a channel failure is discussed at col. 9, line 44 to col. 10, line 20 and thereafter*).

Regarding **claim 14**, in addition to features recited in base claim 11 (see *rationales discussed above*), Taniguchi further discloses wherein the managing of the network connections performed by the network elements includes storing current concatenation information during a ring switch operation of the ring network (*col. 10, lines 39-45 or col. 12, lines 14-60 and thereafter*).

Regarding **claim 15**, in addition to features recited in base claim 11 (see *rationales discussed above*), Taniguchi further discloses wherein the managing of the network connections performed by the network elements includes squelching certain network connection(s) during a partial ring switch operation of the ring network (*col. 10, lines 39-45 or col. 12, lines 14-60 and thereafter*).

Regarding **claim 16**, in addition to features recited in base claim 11 (see *rationales discussed above*), Taniguchi further discloses the configuration message includes a message ID, a node ID, a span ID, a line ID, line timeslots information, timeslot concatenation state, and timeslot add/drop state information (*the frame ID, node ID, span ID and line ID discussed at col. 9, lines 7-43 and the line timeslots information, time slot concatenation state as well as add/drop state information discussed at col. 10, lines 30-45 and thereafter*).

Regarding **claim 17**, in addition to features recited in base claim 11 (see *rationales discussed above*), Taniguchi further discloses said network elements being capable of adding, dropping, passing through, and interchanging timeslots within the network connections (*col. 9, lines 41-42, Taniguchi discloses each node creates a squelch table according to the ring topology*).

Allowable Subject Matter

6. Claims 10 and 18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record, considered individually or in combination, fails to fairly show or suggest the claimed novel and unobvious limitation of "*wherein the network connections including working and protect network connections, wherein the network connections are permitted to be of different bandwidths, wherein the configuration*

message includes timeslot concatenation information, the method further comprising: detecting failure of a span carrying one or more network connections; reconfiguring, based on the configuration message, network elements adjacent to the failed span to reroute network traffic over the protect network connections; and reconfiguring, based on the configuration message, the non-adjacent network elements not adjacent to the failed span to pass through network traffic entering from the protect network connections”, structurally and functionally interconnected with other limitations in a manner as recited in the dependent claims 10 and 18.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lu (USP 5,412,652).

Wu, Emerging Technologies for Fiber Network Survivability, IEEE, pages 60-74, 1995.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is 571-272-3164. The examiner can normally be reached on 7:00AM-3:30PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar can be reached on 571-272-7488. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Frank Duong', with a stylized, cursive script.

**FRANK DUONG
PRIMARY EXAMINER**

March 27, 2006